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ABSTRACT

One hundred and five English undergraduate college students at two colleges in England completed the Holland Vocational Preference Inventory (VPI), the Barron Ego Strength Scale, the Adult Nowicki-Strickland Internal-External Control Scale, and the Occupational Values Q Sort. Congruent students were identified by matching their reading (major) with their scores on the six Holland type indicators. A multivariate analysis of variance (MANOVA) revealed that congruent subjects exhibited a higher level of internality, greater ego strength, and less affiliation than incongruent subjects. Results support Holland's theory that subjects whose personality types and interests match their occupational goals tend to have more ego strength and internal locus of control and subsequently to find more job satisfaction than those who lack this congruency. A question that was explored was the practicality of applying American measurement techniques to an undergraduate English college population. In this sample, the measures seemed to work and to satisfy the students. (Author/KC)

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Congruence, Locus of Control, and Readings of English College Students -- An Application of John Holland's Theory of Vocational Choice

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Abstract

One hundred and five English undergraduate college students at two colleges in the United Kingdom completed the Holland VPI, the Barron Ego Strength Scale, the Adult Nowicki-Strickland Internal Control Scale, and the Occupational Values Q Sort. Congruent students were identified by matching their reading (major) with their scores on the six Holland type indicators. A Multivariate Analysis of Variance (MANOVA) revealed that congruent subjects exhibited a higher level of internality, greater ego strength, and less affiliation than incongruent subjects. Results are discussed with respect to Holland's theory. The practicability of applying American measurement techniques to an undergraduate English college population is also explored.

In his definitive work, John Holland (1973) states that "vocational satisfaction, stability and achievement depend on the congruence between one's personality and the environment in which one works." More than 25 studies (Holland, 1973; Osipow, 1973; Walsh, 1973) have investigated the relationship between the congruent personality and environment interactions, personality and behaviorable variables, (Morrow, 1971; Nofziger, Holland and Gottfredson, 1975) the congruent personality and college major (Gross and Galer, 1974; Walsh and Lewis, 1974; Walsh, 1974; Spokane and Derby, 1979). These studies lend support to the existence of congruence between personality, college major, and occupational choice in the United States. Nofziger et al. (1975), employing 1,878 college students found significant agreement with Holland's classification codes. He concluded that

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students whose personality types least matched the Holland codes indicated the least satisfaction with their college major.

The purpose of this study is to examine the Holland classification codes of British college students and their relationship to choice of major, congruence, occupational values, and locus of control. Holland (1966) and Holland and Holland (1977) have extensively investigated the distribution of personality patterns found in various college majors in the United States. These results support their claim that certain personality types will seek out specific college majors. These two studies raise the intriguing question: does such behavior exist in other cultures or is it germane only to the American environment? The acceptance of John Holland's Theory of Occupation Choice has been accelerated in this country by both his own research and that of other independent investigators, as cited above. The next test of his theory would be to investigate its applicability to a related but foreign environment. Are the ideas of John Holland applicable outside the American culture? Are similar personality code types found in English students, and do they reflect matching college readings (majors)?

Theoretical Framework

The theoretical framework for this study is based upon the concepts of John Holland (1973). Holland hypothesizes that in the American culture most persons can be categorized as one of six personality types: Realistic, Intellectual, Social, Conventional, Enterprising, and Artistic. He also believes that there are six matching work environments: Realistic, Intellectual, Social, Conventional, Enterprising, and Artistic. People search for work environments and vocations that will allow them to express their personalities. In short, there must be a natural congruence between a person's work and his personality if he is to be happy and satisfied in life. Holland views the selection of an occupation as an expression of personality.

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Holland further believes that members of a particular vocation have both similar personalities and similar histories of personal development. Because of these similarities, these people respond to situations and problems in similar ways, and they create characteristic interpersonal environments which project correct and incorrect vocational behaviors.

Career Selection - English and United States Cooperation

English and American exchanges in career education programs have resulted in visitations to England from a number of notable American scholars, among them Donald Super, Gilbert Wrenn, C.H. Patterson, Donald Blocher and Edwin Herr (Hopson, 1976). From a conceptual viewpoint, the British seem to be most interested in the developmental model for career selection as proposed by Donald Super (Weinrack, 1982). Thus far, little interest has been generated by the personality theory of John Holland. Holland's theory, though strongly supported by research with an American college population, has not been at present adopted in the United Kingdom.

Although exchanges of ideas regarding occupational choice have occurred, Herr and Watts (1978) believe that career education procedures in Britain lack the length, depth, breadth and scope of similar efforts found in the United States. Crowley (1983) perhaps best sums up the mood of English attitudes to the application of American career selection methods by commenting, "Despite various American studies which have shown a definite relationship between measured interests, occupational entry, and subsequent job satisfaction, there appears to be a general reluctance in Britain to attempt predictive interpretations." Crowly also states, "American studies abound concerning the relative merits of measured versus expressed or stated interests but there are few British attempts to support this work." Avent, Sisterson, Fawcett, Watts, and Newsome (1983) conclude that economic conditions and recent legislation in the United Kingdom have raised the demand for more effective career education advisement for university students in

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England, while career selection procedures of college students (Zager, Arbit, Faiten, and Friedland, 1983) has been receiving attention in British journals. Indications are that perhaps the time is ripe for England to make a stronger commitment to investigating the feasibility of applying American approaches to career selection.

This study will investigate Holland's concepts of congruence, career interests, occupational values and college readings (majors) with a British population in their home environment. It is theorized that an American application of career selection procedures may be feasible for English college students. This study will test this concept.

Method

Sample

One hundred and five volunteer students from two English undergraduate colleges, Rolle College in Exmouth, England, and The College of St. Mark and St. John in Plymouth, England, responded to four instruments in an individual situation. Data was collected during the Spring of 1983. The sample was composed of 1 R type, 10 I types, 22 S types, 3 C types, 8 E types, and 57 A types as measured by the Vocational Preference Inventory (VPI) high-point raw score codes. Thirty-two males and seventy-three females participated in the study.

Instruments

The four instruments used in the study were: The Vocational Preference Inventory (Holland, 1965), the Adult Nowicki-Strickland Internal-External Control Scale (1974), the Barron Ego Strength Scale (Barron, 1953) and an experimental occupational values Q sort.

Holland's Vocational Preference Inventory (VPI) is composed of 160 occupational titles to which the student responds as either liking or disliking. The scale provides six occupational preferences: Realistic, Investigative, Social, Conventional, Enterprising and Artistic, and five additional measures: Self-

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control, Masculinity, Status, Infrequency and Acquiescence. The seventh edition of the VPI has reliability coefficients varying from .42 to .91 for males, .53 to .91 for females. The author reports evidence which suggests strong construct validity and moderate predictive validity.

The Adult Nowicki-Strickland Internal-External Control Scale (ANS-IE) is a 40 item instrument to which the subjects responds yes or no to items they believe to be true of themselves. Nowicki and Duke (1974) gathered data from 766 subjects in ten separate studies and report a split-half reliability varying from .74 to .86 and test retest reliabilities of .83 for a six week period. Construct validity correlations with Rolle I-E scale were .68, .48 and .59 for three separate samples.

The Barron Ego Strength Scale (E scores) is a 68 item subscale of the Minnesota Multiphasic Personality Inventory. The scale is a measure of personality resources and assets which allow the individual to adjust to stress and to profit from support and psychological insight. Subjects mark true or false for each item. Validity studies rate high scores as indicative better overall psychological health. Three month test-retest reliability is .72 and odd-even reliability is .76.

The Occupational Values Q Sort consists of 41 occupational values which are classified into seven areas. Helping 1. (1) Help Others, (2) Help Society, (3) Moral Fulfillment; Affiliation 2. (4) Affiliation, (5) Work with Others, (6) Public Contact, (7) Community, (8) Friendships; Security 3. (9) Security, (10) Job Tranquility, (11) Stability, (12) Precision Work; Independence 4. (13) Independence, (14) Work Alone, (15) Time Freedom, (16) Location; Creativity 5. (17) Creativity, (18) Aesthetics, (19) Artistic Creativity, (20) Creative Expression; Excitement 6. (21) Excitement, (22) Adventure, (23) Fast Pace, (24) Change and Variety, (25) Work is the Frontiers of Knowledge, (26) Challenging Problems, (27) Physical Challenge, (28) Work under Pressure; Power 7. (29) Power and

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Authority, (30 Advancement, (31) Recognition, (32) High Earnings Anticipated, (33) Status, (34) Profit, Gain, (35) Intellectual Status, (36) Knowledge, (37) Influence People, (38) Supervision, (39) Competition, (40) Make Decisions, (41) Exercise Competence. Validity and Reliability are not yet established for this measure.

Procedure

Subjects were individually interviewed and asked to state their reading (major). Each subject then responded individually to the VPI, the Occupational Values Q Sort, The Adult Nowicki-Strickland Internal-External Locus of Control Scale and the Barron Ego Strength Scale. Subjects were provided a definition and interpretation of scale terms and statements at their request. On the Occupational Values Q Sort, subjects were requested to place the Occupational Values into five categories: (1) always valued, (2) often valued, (3) sometimes valued, (4) seldom valued, and (5) never valued. Subjects were then told to select seven values in the Always Valued category. Upon completion of the scales, the students were briefed regarding the purpose of the study and content of the tests, and they were provided with an individual interpretation of the VPI and the Occupational Values Q Sort. Each student was allotted one and one-half hours for testing and test interpretation.

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Groups

Subjects were classified as congruent on the basis of matching their reading (major) with the Holland code on the VPI. As an example, a subject which had an identical match between a high point code Artistic (A) and a reading in English (A) was classified as congruent. A subject whose readings and codes were nonmatching was classified as incongruent. Sixty-four subjects were identified as congruent and 41 subjects identified as incongruent. The seven occupational values identified as always valued on the Occupational Values Q Sort were each assigned to one of the following values category: (1) Helping; (2) Affiliation; (3) Security; (4) Independence; (5) Creativity; (6) Excitement; and (7) Power.

A multivariate of analysis (MANOVA) was employed to compare the congruent and incongruent subjects on the VPI supplemental scales, the seven values of the Occupational Values Q Sort, the Adult Nowicki-Strickland Internal-External Control Scale, and the Barron Ego Strength Scale. It was hypothesized that congruent subjects would be higher in ego strength, internal locus of control and occupational values than incongruent subjects.

Results

The means, standard deviations, and tests of significance on the dependent variables for the congruent and incongruent groups is presented on Table 1.

The results of the MANOVA performed on the dependent variables revealed a (Pillais .29016, Hotellings .40877, and Wills .70924) Justification for further analysis using univariate F tests was established.

An analysis of the univariate tests indicate that congruent subjects exhibited a higher level of internality than did the incongruent subjects (F .063) on the Adult Nowicki-Strickland Internal-External Control Scale, (2) a higher level of ego strength than the incongruent subjects (f .067) on the Barron Ego Strength Scale, and (3) a lower value for affiliation than the incongruent subjects (f .070) on the Occupational Values Q Sort. The remaining dependent variables were interpreted as nonsignificant.

Discussion

This study hypothesized that congruent subjects would be higher in ego strength, internal locus of control, and occupational values than incongruent subjects. Results are very encouraging that this is the case. Congruent students did exhibit a tendency for greater ego strength and internality, giving support to Holland's concept that people who are better adjusted to life will be more consistent in their occupational choice. It is recommended that additional studies of a similar nature be conducted with English polytechnic colleges and universities and that research data also be gathered from students in the fifth

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and sixth forms in English preparatory schools. In addition, the concepts of John Holland would appear to be worthy of further investigation within other cultures.

This study also investigated an experimental Occupational Values Q Sort. Results indicate that congruent students valued affiliation less than incongruent students. No significant differences were obtained for the remaining six occupational values. A tentative interpretation is offered that congruent students are higher on internality on the locus of control scale than incongruent students and thus their lower value for affiliation reflects their independence and self-determination.

This study explored the feasibility of testing English college students with measuring instruments developed for use in the United States. All 105 subjects were individually administered each instrument by the author. Subjects were allowed to request an explanation of terms and statements from each instrument before responding to any item on the scales. The author usually received from three to five requests, mostly for an interpretation of an occupation on the Holland VPI sclae. All 105 subjects completed the four scales.

Subjects were recruited on a volunteer basis with the aid of career officer at each college and usually expressed satisfaction with the testing and interpretation procedures. They often recommended the experience to other students. From this, it would appear that English college students are willing to participate in procedures which employ objective vocational measuring instruments and attach values to an interpretation of these scales.

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	Congruent (N=61)				Non-Congruent (N=41)				
	MALE (N=16)		FEMALE (N=48)		MALE (N=16)		FEMALE (N=25)		
VARIABLE	X	SD	X	SD	X	SD	X	SD	F TEST
Self-Control	7.88	4.87	10.71	3.12	7.87	3.05	9.84	3.21	.560
Masculinity	5.50	2.56	5.23	2.27	6.94	3.00	5.40	2.45	.238
Status	9.19	1.76	9.13	2.28	9.94	2.59	8.64	2.68	.224
Infrequency	5.25	2.38	6.40	2.39	4.56	2.80	6.32	2.67	.575
Acquiescence	12.88	5.34	11.13	4.68	12.13	3.70	12.04	5.18	.421
Helping	4.48	2.37	4.08	2.13	4.38	2.22	4.16	2.06	.882
Affiliation	4.63	2.09	3.69	2.18	4.19	2.40	5.00	1.98	.063
Security	3.69	2.02	4.60	2.21	4.38	2.19	4.08	2.16	.198
Independence	4.56	2.13	4.02	1.99	5.00	1.97	4.20	1.85	.762
Creativity	4.69	1.45	4.79	1.90	5.06	2.08	4.64	2.16	.529
Excitement	5.44	1.79	4.46	2.01	4.63	1.82	4.76	2.11	.194
Power	5.00	1.90	4.88	1.88	5.19	1.87	4.32	2.04	.371
Locus of Control	10.69	4.29	10.89	4.65	9.50	2.63	13.20	4.85	.067
Ego Strength	44.81	6.04	40.02	7.40	40.13	7.75	40.84	6.10	.070

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